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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,129

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Hironori Mizuta

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04/14/2011

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EXAMINER

DELCOTTO, GREGORY R

ART UNIT

PAPER NUMBER

1761

NOTIFICATION DATE

DELIVERY MODE

04/14/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No. 10/577,129	Applicant(s) MIZUTA ET AL.	
	Examiner Gregory R. Del Cotto	Art Unit 1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 3/24/11.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-15 and 17-33 is/are pending in the application.
- 4a) Of the above claim(s) 21-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-15,17-20 and 29-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 3-15, and 17-33 are pending. Claims 2 and 16 have been canceled.

Applicant's response filed 2/28/011 has been entered.

Claims 21-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/24/10.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/24/11 has been entered.

Objections/Rejections Withdrawn

The following objections/rejections as set forth in the Office action mailed 10/29/10 have been withdrawn:

The rejection of claims 1, 3-15, 17-20, and 29 under 35 U.S.C. 102(e) as being anticipated by Kanno et al (US 2004/0106531) has been withdrawn.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-15, 17-20, and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable Ikemoto et al (US 2003/0181344) in view of Kanno (US 2004/0106531).

Ikemoto et al teach a photoresist stripping composition containing at least one oxymethylamine compound. See Abstract. The cleaning composition may contain an alkaline compound, an organic solvent, an anti-corrosion agent, and a surfactant, either alone or in combination. See para. 34. Suitable anti-corrosion agents include triazole compounds such as benzotriazole, etc. See paras. 39 and Table 2. Suitable solvents include ethylene glycol, ethylene glycol monomethyl ether, ethanol, etc. See para. 37.

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The anti-corrosion agent may include aromatic hydroxyl compounds, sugar alcohols, triazole compounds, and chelating compounds. Suitable chelating compounds include 1,2-propane diaminetetramethylene phosphonic acid, citric acid, etc. These compounds may be used alone or in combination of two or more. See paras. 39-43. Further, the anti-corrosion agent is generally present in amounts of 30% by weight or less. See paras. 47 and 48. Specifically, Ikemoto et al teach compositions containing 65% 1-amino-2-propanol, 1% butoxymethyldiethylamine, 14% diethylene glycol monomethyl ether, 18% water, and 2% 4-tert butylcatechol. Additionally, Ikemoto et al teach compositions containing 30% ethanolamine, 2% aminoethoxyethanol, 40% dipropylene glycol methyl ether, 26% water, and 2% citric acid. See paras. 63-67.

Ikemoto et al do not teach, with sufficient specificity, a composition having the specific pH as recited by the instant claims or a composition having the specific pH containing an organic acid, a complexing agent, an organic solvent, and the other requisite components of the composition in the specific amounts as recited by the instant claims.

Kanno et al teach a cleaning composition for removing resists containing a water-soluble organic solvent, phosphonic acid, water, a copper corrosion inhibitor, etc., such that the composition has a pH from 2 to 8. Suitable corrosion inhibitors include citric acid, etc. See paras. 71-75. Suitable solvents include diethylene glycol monomethyl ether, etc. See paras. 42-43. Suitable phosphonic acids include diethylenetriaminepenta(methylene phosphonic acid), 1-hydroxyl ethylidene-1,1-diphosphonic acid, etc. The phosphonic acid is present in amounts from 0.5% to 15%

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by weight. See paras. 62-63. Also, Kanno et al teach compositions containing, for example, 70% total solvent wherein the solvent contains 49% DMSO (dimethyl sulfoxide) and 21% DGME (diethylene glycol monomethyl ether). See Table 5, Example 32.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate the composition of Ikemoto et al at a pH from 0.5 to 6.5, with a reasonable expectation of success, because Kanno et al teach a similar photoresist stripping composition having a pH of from 2 to 8 and further, Ikemoto et al teaches that the amount and types of required components added to the composition may be varied.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a composition having the specific pH containing an organic acid, a complexing agent, an organic solvent, and the other requisite components of the composition in the specific amounts as recited by the instant claims, with a reasonable expectation of success and similar results with respect to other disclosed components, because the broad teachings of Ikemoto et al in combination with Kanno et al suggest a composition having the specific pH containing an organic acid, a complexing agent, an organic solvent, and the other requisite components of the composition in the specific amounts as recited by the instant claims.

Response to Arguments

With respect to the rejection of the instant claims under 35 USC 103 using Ikemoto et al, Applicant states that the instant claims recite “consisting essentially of”

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which would exclude the presence of oxymethylamine as required in the compositions taught by Ikemoto et al. In response, note that, the Examiner asserts that "consisting essentially of" serves to exclude those components which materially or negatively affect the claimed composition. Further, the Examiner asserts that Applicant has provided no statement in the instant specification or data showing that oxymethylamine would materially or negatively affect the composition as recited by the instant claims.

Therefore, in the absence of such a statement in the specification or data, the Examiner asserts that "consisting essentially of" would not exclude the presence of oxymethylamine as required in the composition taught by Ikemoto et al. Note that, for the purposes of searching for and applying prior art under 35 USC 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising". See e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355. See MPEP 2111.03.

Additionally, Applicant states that while the Examiner asserts that Ikemoto et al teach that the composition may contain relatively large amounts up to 30% by weight of acid such as citric acid which would allow for the formulation of acidic compositions, there is technological common sense to hold that the pH of the compositions as taught by Ikemoto et al are alkaline since alkaline compositions can remove a resist and acidic compositions cannot. Furthermore, Applicant states that all the Examples of Ikemoto et al contain alkali components in greater concentrations of any acidic components (i.e. citric acid) which would result in compositions which are alkaline. In response, note

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that, the Examiner asserts that the teachings of a reference are not limited to the preferred embodiments. Ikemoto et al teaches that the compositions may contain as little as 0.001% by weight of the oxymethylamine compound and 0.001% by weight of the alkaline compound (See claim 13 of Ikemoto et al) which clearly indicates that the compositions may contain very small amounts of alkaline compounds resulting in compositions of widely varying pH values including the values recited by the instant claims. Further, as stated previously, Ikemoto et al teaches that the composition may contain relatively large amounts up to 30% of acid such as citric acid (See para. 48 of Ikemoto et al) which would allow for the formulation of compositions having the same pH values as recited by the instant claims.

Also, as noted above and contrary to Applicant's statement regarding acidic photoresist strippers/cleaners, Kanno et al has been relied upon as a secondary reference showing that photoresist strippers/cleaners may be formulated at acidic pH values such as compositions having a pH from 2 to 8 (See, for example, para. 72 of Kanno et al). As stated above, the Examiner asserts that one of ordinary skill in the art clearly would have been motivated to formulate the composition of Ikemoto et al at a pH from 0.5 to 6.5, with a reasonable expectation of success, because Kanno et al teach a similar photoresist stripping composition having a pH of from 2 to 8 and further, Ikemoto et al teaches that the amount and types of required components added to the composition may be varied. Thus, the Examiner asserts that the teachings of Ikemoto et al in view of Kanno et al are sufficient to render the claimed invention obvious under 35 USC 103.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon are considered to be cumulative to or less pertinent than those relied upon or discussed above.

Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory R. Del Cotto whose telephone number is (571) 272-1312. The examiner can normally be reached on Mon. thru Fri. from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory R. Del Cotto/
Primary Examiner, Art Unit 1796

/G. R. D./
April 10, 2011